CLAIMS

What is claimed is:

1. A dual pivot concealed hinge mechanism comprising:

a body side hinge support comprising:

a pivot stop;

a door side hinge support having a cam surface, the cam surface terminating in a detent; and

a U-shaped hinge arm pivotally connected to the body side hinge support and the door side hinge support, and comprising:

a rocker arm pivotally mounted to the hinge arm and having a cam follower biased against the cam surface; and

a stop linkage pivotally connected between the hinge arm and the body side hinge support,

whereby the hinge mechanism is adapted to operate through a substantially semi-circular range of motion, a first portion of the range of motion pivoting the door side hinge support relative to the hinge arm as the cam follower traverses the cam surface, until the cam follower engages the detent, and a second portion of the range of motion pivoting the hinge arm relative to the body side hinge support until the stop linkage engages the pivot stop.

2. The hinge mechanism of claim 1, wherein the body side hinge support further comprises a torsion rod having a reaction leg, and the stop linkage further comprises a roller, the roller adapted to engage the reaction leg.

3. The hinge mechanism of claim 2, wherein the stop linkage comprises a bell crank arm pivotally mounted to the body side hinge support, and the roller is mounted on the bell crank arm.

4. The hinge mechanism of claim 2, wherein the stop linkage is biased against the pivot stop by the reaction leg.

5. A dual pivot hinge mechanism for a vehicle door, adapted to pivot the vehicle door about a substantially semi-circular arc, wherein the door pivots through a first portion of the arc about a first pivot pin mounted in a first hinge support and pivots through a second portion of the arc about a second pivot pin mounted in a second hinge support, the hinge mechanism further comprising:

the first hinge support comprising a cam surface corresponding to a first portion of the arc and terminating in a detent position;

the second hinge support comprising a pivot stop;

a hinge arm pivotally connecting the first and second pivot pins;

a cam follower mounted to the hinge arm, the cam follower being biased against the cam surface; and

a stop linkage operably connecting the hinge arm to the second hinge support and adapted to engage the pivot stop to limit rotation of the hinge arm about the second pivot pin.

6. The hinge mechanism of claim 5, wherein the second hinge support further comprises a torsion rod having a reaction leg, and the stop linkage further comprises a roller, the roller adapted to engage the reaction leg.

7. The hinge mechanism of claim 6, wherein the stop linkage comprises a bell crank arm pivotally mounted to the second hinge support, and the roller is mounted on the bell crank arm.

8. The hinge mechanism of claim 6, wherein the stop linkage is biased against the pivot stop by the reaction leg.

9. The hinge mechanism of claim 5, further comprising a rocker arm pivotally mounted to the hinge arm, the cam follower being mounted on the rocker arm.